



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

11-A

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/694,473	10/27/2003	Gregg M. Gallatin	FIS920030109US1	2511
29505 7590 02/27/2007 LAW OFFICE OF DELIO & PETERSON, LLC. 121 WHITNEY AVENUE NEW HAVEN, CT 06510			EXAMINER DINH, PAUL	
			ART UNIT	PAPER NUMBER
			2825	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/27/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No. 10/694,473	Applicant(s) GALLATIN ET AL.	
	Examiner Paul Dinh	Art Unit 2825	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 February 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 October 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input checked="" type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>10/27/03</u> . | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 2825

DETAILED ACTION

This is a response to the election filed on 2/5/07.

Per the applicants traverse on the grounds that the claimed groups are not independent and distinct; the election requirement has been withdrawn and thus, the claimed groups are considered generic and similar.

Claims 1-30 are pending.

Drawings

New formal drawings in compliance with 37 CFR 1.121(d) are required in this application because the current drawings are informal. Applicant is advised to employ the services of a competent patent draftsman outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. The formal drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.

Specification

The specification is objected to because paragraph 0001 (US pub. 2005/0091014, CROSS-REFERENCE TO RELATED APPLICATIONS) must be filled/updated with current/latest information.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

Claims 1-30 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Art Unit: 2825

Claims 1, 20 and 30 are rejected because “single loop finite geometrical shape” is not defined in claims 1, 20 and 30.

Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Claims 1 and 30 are rejected for being incomplete for omitting essential steps/elements, such omission amounting to a gap between the elements. See MPEP § 2172.01. The collapsing omitting essential steps/elements, i.e., what is done/performed to collapse?

Claims 2, 20 are rejected for being incomplete for omitting essential steps/elements, such omission amounting to a gap between the elements. See MPEP § 2172.01. The pinning omitting essential steps/elements, i.e., what being done/performed to obtain pinning.

Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Claim 20 is rejected because “ones” is not clear as to what is meant by “ones”

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) The invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) The invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

1. Claims 1-10, 20-21, 30 are rejected under 35 U.S.C. 102(e) as being anticipated by the prior art of record Granik (US pub. 2004/0133871)

(Claims 1 and similarly recited claims 20, 30)

Art Unit: 2825

Providing a mask matrix (abstract, fig 2-3, 5) having a region of interest (ROI) with a boundary;

Locating a plurality of points of interest within said mask matrix (fig 2-3, 5);

Determining a first single loop finite geometrical shape having a plurality of Vertices representative of said located plurality of points of interest (fig 1, 3-4); and

Collapsing said first single loop finite geometrical shape onto said ROI to Correct for optical proximity (fig 1, 3-5).

(Claim 2) wherein said step of collapsing said first single loop finite geometrical shape forms a second single loop finite geometrical shape collapsed onto said ROI by pinning at least those vertices of said first single loop finite geometrical shape residing outside the ROI to said boundary of said ROI (fig 1, 3-5).

(Claims 3-4) wherein said first and second single loop finite geometrical shapes have identical/ different finite geometrical shapes (fig 1, 3-4, 6).

(Claims 5-6) wherein said first and second single loop finite geometrical shapes have an identical/different number of vertices (fig 1, 3-5).

(Claims 7-8) wherein said step of determining said first single loop finite geometrical shape comprises computing said first single loop finite geometrical shape based on a correlation between said plurality of points of interest and said region of interest (fig 1, 3-4, 6); locating a first vertex of said first single loop finite geometrical shape; locating a second vertex of said first single loop finite geometrical shape; and determining a location of said first and second vertices within said matrix in relation to Said region of interest (fig 1, 3-4, 6).

(Claims 9-10) wherein said first and second vertices are adjacent to each other, and are respectively representative of adjacent first and second points of interest of said plurality of points of interest within said mask matrix (fig 3, 5); wherein said location comprises both said first and second vertices residing within said ROI (fig 1, 3-6), the method further including the steps of: assigning said first vertex to a first vertex of said second single loop finite geometrical shape within said ROI; and repeating said steps for all vertices of said first single loop finite geometrical shape (fig 5-6).

Art Unit: 2825

(Claim 21) wherein said located plurality of points of interest are representative of a group of polygons within said mask matrix such that said plurality of vertices of said first single loop polygon are representative of all vertices of said group of polygons (fig 1, 3-5).

2. Claims 1-10, 20-21, 30 are rejected under 35 U.S.C. 102(b) as being anticipated by the prior art of record Rieger (USP 6289499)

(Claims 1 and similarly recited claims 20, 30)

Providing a mask matrix (abstract) having a region of interest (ROI) with a boundary;

Locating a plurality of points of interest within said mask matrix (abstract, fig 5-7);

Determining a first single loop finite geometrical shape having a plurality of Vertices representative of said located plurality of points of interest (fig 12); and

Collapsing said first single loop finite geometrical shape onto said ROI to Correct for optical proximity (fig 7, 12).

(Claim 2) wherein said step of collapsing said first single loop finite geometrical shape forms a second single loop finite geometrical shape collapsed onto said ROI by pinning at least those vertices of said first single loop finite geometrical shape residing outside the ROI to said boundary of said ROI (fig 7, 12).

(Claims 3-4) wherein said first and second single loop finite geometrical shapes have identical/ different finite geometrical shapes (fig 3-6, 12).

(Claims 5-6) wherein said first and second single loop finite geometrical shapes have an identical/different number of vertices (fig 3, 5, 7, 12).

(Claims 7-8) wherein said step of determining said first single loop finite geometrical shape comprises computing said first single loop finite geometrical shape based on a correlation between said plurality of points of interest and said region of interest (fig 5-7, 12); locating a first vertex of said first single loop finite geometrical shape; locating a second vertex of said first single loop finite geometrical shape; and determining a location of said first and second vertices within said matrix in relation to

Art Unit: 2825

Said region of interest (fig 5-7, 12).

(Claims 9-10) wherein said first and second vertices are adjacent to each other, and are respectively representative of adjacent first and second points of interest of said plurality of points of interest within said mask matrix (abstract); wherein said location comprises both said first and second vertices residing within said ROI (abstract, fig 5-7, 12), the method further including the steps of: assigning said first vertex to a first vertex of said second single loop finite geometrical shape within said ROI; and repeating said steps for all vertices of said first single loop finite geometrical shape (fig 5-7, 12).

(Claim 21) wherein said located plurality of points of interest are representative of a group of polygons within said mask matrix such that said plurality of vertices of said first single loop polygon are representative of all vertices of said group of polygons (abstract, fig 12).

3. Claims 1-10, 20-21, 30 are rejected under 35 U.S.C. 102(b) as being anticipated by the prior art of record Pierrat (USP 6453457)

(Claims 1 and similarly recited claims 20, 30)

Providing a mask matrix (col 4 line 9+) having a region of interest with a boundary;

Locating a plurality of points of interest within said mask matrix (fig 4-5, 8-11);

Determining a first single loop finite geometrical shape having a plurality of Vertices representative of said located plurality of points of interest (fig 1, 4-5, 7-11);
and

Collapsing said first single loop finite geometrical shape onto said ROI to Correct for optical proximity (fig 1, 5, 8, 10-11).

(Claim 2) wherein said step of collapsing said first single loop finite geometrical shape forms a second single loop finite geometrical shape collapsed onto said ROI by pinning at least those vertices of said first single loop finite geometrical shape residing outside the ROI to said boundary of said ROI (fig 1, 5, 8, 10-11).

(Claims 3-4) wherein said first and second single loop finite geometrical shapes have identical/ different finite geometrical shapes (fig 1, 4, 6-8).

Art Unit: 2825

(Claims 5-6) wherein said first and second single loop finite geometrical shapes have an identical/different number of vertices (fig 1, 4-5, 8-10).

(Claims 7-8) wherein said step of determining said first single loop finite geometrical shape comprises computing said first single loop finite geometrical shape based on a correlation between said plurality of points of interest and said region of interest (fig 1, 8-10); locating a first vertex of said first single loop finite geometrical shape; locating a second vertex of said first single loop finite geometrical shape; and determining a location of said first and second vertices within said matrix in relation to Said region of interest (fig 1, 8-11).

(Claims 9-10) wherein said first and second vertices are adjacent to each other, and are respectively representative of adjacent first and second points of interest of said plurality of points of interest within said mask matrix (fig 1, 5, 7, 8-10); wherein said location comprises both said first and second vertices residing within said ROI (fig 1, 5, 7, 8-10), the method further including the steps of: assigning said first vertex to a first vertex of said second single loop finite geometrical shape within said ROI; and repeating said steps for all vertices of said first single loop finite geometrical shape (fig 1, 5, 7, 8-10).

(Claim 21) wherein said located plurality of points of interest are representative of a group of polygons within said mask matrix such that said plurality of vertices of said first single loop polygon are representative of all vertices of said group of polygons (fig 1, 3, 5, 7, 11).

4. Claims 1-10, 20-21, 30 are rejected under 35 U.S.C. 102(b) as being anticipated by the prior art of record Lu (USP 6303253)

(Claims 1 and similarly recited claims 20, 30)

Providing a mask matrix (fig 1, 4-7) having a region of interest (ROI) with a boundary;

Locating a plurality of points of interest within said mask matrix (fig 1, 4-7);

Determining a first single loop finite geometrical shape having a plurality of Vertices representative of said located plurality of points of interest (fig 1-3, 7); and

Collapsing said first single loop finite geometrical shape onto said ROI to Correct for optical proximity (fig 1, 3-7).

(Claim 2) wherein said step of collapsing said first single loop finite geometrical shape forms a second single loop finite geometrical shape collapsed onto said ROI by pinning at least those vertices of said first single loop finite geometrical shape residing outside the ROI to said boundary of said ROI (fig 1, 3-7).

(Claims 3-4) wherein said first and second single loop finite geometrical shapes have identical/ different finite geometrical shapes (fig 1, 3-4, 6).

(Claims 5-6) wherein said first and second single loop finite geometrical shapes have an identical/different number of vertices (fig 1, 3-5).

(Claims 7-8) wherein said step of determining said first single loop finite geometrical shape comprises computing said first single loop finite geometrical shape based on a correlation between said plurality of points of interest and said region of interest (fig 1, 3-4, 6); locating a first vertex of said first single loop finite geometrical shape; locating a second vertex of said first single loop finite geometrical shape; and determining a location of said first and second vertices within said matrix in relation to Said region of interest (fig 1, 3-4, 6).

(Claims 9-10) wherein said first and second vertices are adjacent to each other, and are respectively representative of adjacent first and second points of interest of said plurality of points of interest within said mask matrix (fig 1, 3, 5); wherein said location comprises both said first and second vertices residing within said ROI (fig 1, 3-6), the method further including the steps of: assigning said first vertex to a first vertex of said second single loop finite geometrical shape within said ROI; and repeating said steps for all vertices of said first single loop finite geometrical shape (fig 1, 3-7).

(Claim 21) wherein said located plurality of points of interest are representative of a group of polygons within said mask matrix such that said plurality of vertices of said first single loop polygon are representative of all vertices of said group of polygons (fig 4-7).

Art Unit: 2825

Allowable Subject Matter

Claims 11-19, 22-29 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Claims 11-19 would be allowable because the prior art of record does not teach or suggest the limitations in claims 11, 12, 13 and 22.

Correspondence Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul Dinh whose telephone number is 571-272-1890. If attempts to reach the examiner by telephone are unsuccessful, the examiner's Supervisor, Jack Chiang can be reached on 571-272-7483. The fax number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Paul Dinh
Primary Examiner
Art Unit 2825

